

Best Available Copy

PCT/GB 2004 / 0 0 0 7 2 5



PRIORITY DOCUMENT

SUBMITTED OR TRANSMITTED IN
COMPLIANCE WITH RULE 17.1(a) OR (b)

The Patent Office

Concept House

Cardiff Road

Newport

South Wales

RECEIVED

NP10 8QQ

16 MAR 2004

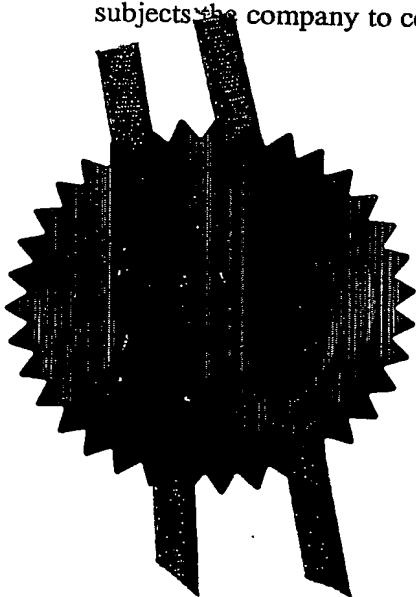
WIPO PCT

I, the undersigned, being an officer duly authorised in accordance with Section 74(1) and (4) of the Deregulation & Contracting Out Act 1994, to sign and issue certificates on behalf of the Comptroller-General, hereby certify that annexed hereto is a true copy of the documents as originally filed in connection with the patent application identified therein.

In accordance with the Patents (Companies Re-registration) Rules 1982, if a company named in this certificate and any accompanying documents has re-registered under the Companies Act 1980 with the same name as that with which it was registered immediately before re-registration save for the substitution as, or inclusion as, the last part of the name of the words "public limited company" or their equivalents in Welsh, references to the name of the company in this certificate and any accompanying documents shall be treated as references to the name with which it is so re-registered.

In accordance with the rules, the words "public limited company" may be replaced by p.l.c., plc, P.L.C. or PLC.

Re-registration under the Companies Act does not constitute a new legal entity but merely subjects the company to certain additional company law rules.



Signed 

Dated 8 March 2004

Best Available Copy

Patents Form 1/77

Patents Act 1977
(Rule 16)



12 JUN 03 ER14341-1 D02657
P01/7700 0.00-0313515.9

The Patent Office

Cardiff Road
Newport
South Wales
NP10 8QQ

Request for grant of a patent

(See the notes on the back of this form. You can also get an explanatory leaflet from the Patent Office to help you fill in this form.)

1. Your reference 2/P32677GB

2. Patent application number
(The Patent Office will fill in this part)

0313515.9

11 JUN 2003

3. Full name, address and postcode of the or of each applicant *(underline all surnames)*

Survitec Group Limited
Beaufort Road
Birkenhead
Merseyside CH41 1HQ

Patents ADP number *(if you know it)*

854261500

If the applicant is a corporate body, give the country/state of its incorporation

United Kingdom

4. Title of the invention

Liferáft Systems

5. Name of your agent *(if you have one)*

"Address for service" in the United Kingdom to which all correspondence should be sent
(including the postcode)

Mathisen, Macara & Co
The Coach House
6-8 Swakeleys Road
Ickenham
Uxbridge
UB10 8BZ

Patents ADP number *(if you know it)*

1073001

6. If you are declaring priority from one or more earlier patent applications, give the country and the date of filing of the or of each of these earlier applications and *(if you know it)* the or each application number

Country

Priority application number
(if you know it)

Date of filing
(day / month / year)

7. If this application is divided or otherwise derived from an earlier UK application, give the number and the filing date of the earlier application

Number of earlier application

Date of filing
(day / month / year)

8. Is a statement of inventorship and of right to grant of a patent required in support of this request? *(Answer 'Yes' if:*

- a) *any applicant named in part 3 is not an inventor, or*
- b) *there is an inventor who is not named as an applicant, or*
- c) *any named applicant is a corporate body.*

See note (d).

Best Available Copy

9. Enter the number of sheets for any of the following items you are filing with this form.
Do not count copies of the same document

Continuation sheets of this form

Description 6

Claim(s) 3 *D*

Abstract 1

Drawing(s) 3 *A3*

10. If you are also filing any of the following, state how many against each item.

Priority documents

Translations of priority documents

Statement of inventorship and right to grant of a patent (*Patents Form 7/77*)Request for preliminary examination and search (*Patents Form 9/77*)1 *✓*Request for substantive examination
(*Patents Form 10/77*)Any other documents
(please specify)

11.

I/We request the grant of a patent on the basis of this application.

Signature

Date

Mulhouse, Knott & G

11 June 2003

12. Name and daytime telephone number of person to contact in the United Kingdom Stephen Knott (01895 678331)

Warning

After an application for a patent has been filed, the Comptroller of the Patent Office will consider whether publication or communication of the invention should be prohibited or restricted under Section 22 of the Patents Act 1977. You will be informed if it is necessary to prohibit or restrict your invention in this way. Furthermore, if you live in the United Kingdom, Section 23 of the Patents Act 1977 stops you from applying for a patent abroad without first getting written permission from the Patent Office unless an application has been filed at least 6 weeks beforehand in the United Kingdom for a patent for the same invention and either no direction prohibiting publication or communication has been given, or any such direction has been revoked.

Notes

- If you need help to fill in this form or you have any questions, please contact the Patent Office on 08459 500505.
- Write your answers in capital letters using black ink or you may type them.
- If there is not enough space for all the relevant details on any part of this form, please continue on a separate sheet of paper and write "see continuation sheet" in the relevant part(s). Any continuation sheet should be attached to this form.
- If you have answered 'Yes' Patents Form 7/77 will need to be filed.
- Once you have filled in the form you must remember to sign and date it.
- For details of the fee and ways to pay please contact the Patent Office.

Best Available Copy

1

~~DUPLICATE~~

LIFERAFT SYSTEMS

The invention relates to liferaft systems.

GB-A-2318097 discloses a liferaft system comprising a container containing an
5 inflatable liferaft in a hermetically sealed bag and an emergency pack connected to the
liferaft so that, upon inflation of the liferaft, the emergency pack is automatically
drawn into the liferaft. The container is separable to allow deployment of the liferaft
and also to allow the emergency pack to be removed and replaced.

10 It is a problem with such a system that, in order to remove and replace the emergency
pack, the container must be open completely as if the liferaft were being deployed.
Since the liferaft in its hermetically sealed bag is usually packed compactly into the
container, separating the container in this way can release the packed liferaft which
can be difficult to repack in the container.

15

According to a first aspect of the invention, there is provided a liferaft system
comprising a container containing an inflatable liferaft in a hermetically sealed bag
and an emergency pack connected to the liferaft so that, upon inflation of the liferaft,
19 emergency pack is automatically drawn into the liferaft, the container being separable
to allow deployment of the liferaft and including a hatch through which the emergency
20 pack can be removed and replaced.

Best Available Copy

2

According to a second aspect of the invention, there is provided a method of servicing a liferaft system comprising a container containing an inflatable liferaft in a hermetically sealed bag and an emergency pack connected to the liferaft so that, upon inflation of the liferaft, the emergency pack is automatically drawn into the liferaft,
5 the method comprising accessing the emergency pack through a hatch in the container, disconnecting the emergency pack from the liferaft, removing the emergency pack through the hatch, inserting a replacement emergency pack through the hatch into the container and connecting the replacement emergency pack to the liferaft.

10 The following is a more detailed description of an embodiment of the invention, by way of example, reference being made to the accompanying drawings in which:-

Figure 1 is a longitudinal cross section through a liferaft system comprising a container including a liferaft in a hermetically sealed bag and an emergency pack,

Figure 2 is a cross sectional view through the liferaft system of Figure 1,

15 Figure 3 is an end elevation of part of the container of the liferaft system of Figures 1 and 2 and showing a hatch of the liferaft system in a closed disposition,

Figure 4 is a sectional view at X on Figure 3, and

Figure 5 is a similar view to Figure 3 but showing the hatch removed.

20 Referring to the drawings, the liferaft system comprises a container indicated generally at 10 formed by a upper half shell 11 and a lower half shell 12. The upper half shell 11 is of generally semi-circular cross-section (see Figure 2) with end walls

Best Available Cop,

14, 15. Likewise, the lower half shell 12 is of generally semi-circular cross-section with end walls 18, 19. The edges of the upper half shell 11 and the edges of lower half shell 12 are provided with cooperating flanges that seal together to close the container 10. The container 10 maybe moulded from a plastics material and, as seen 5 in Figure 2, lined with a protective foam 22.

A hermetically sealed plastics bag 23 is located within the container. The bag 23 contains a packed deflated liferaft 24 and an inflation system including gas cylinders 25 and control valves 26. The liferaft 24 and the inflation system are of conventional 10 type and will not be described in further detail. The hermetically sealed bag 23 includes two humidity indicators 27 which project through respective end walls 14, 15 of the upper half shell 11 so that they are visible from respective opposite ends of the container 10 from outside the container 10. The humidity indicators 27 indicates whether the integrity of the bag 23 has been compromised by humidity entering the 15 bag 23.

The packing of the liferaft 24 and the inflation system in the hermetically sealed bag 23 is to extend the service life of those items. In this way, the service life may be extended to three year intervals and possibly to five year or longer intervals. It is 20 customary to pack with the liferaft 24 various items that might be needed by persons utilising the liferaft 24 in case of an emergency. Some such items will have a service life interval at least equal to the service life interval of the liferaft 24. An example of

Best Available Copy

such an item is some forms of food. These items are contained in a lower emergency pack 28 that sits in the lower half shell 12 and is partially surrounded by the bag 23 (see Figure 2). The lower emergency pack 28 is connected to the liferaft 24 either through the bag 23 or via the bag 23 so that, upon inflation of the liferaft 24, the 5 emergency pack 28 is automatically drawn into the liferaft 24. An example of such a connection is shown in GB-A-2318097.

There are other emergency items such as, for example, medical supplies, which require servicing or replacement more frequently than the service interval of the liferaft 24.
10 These items are contained in an upper emergency pack 29 best seen in Figures 1 and
2. This emergency pack 29 may, for example, comprise a second bag 30 connected to the liferaft 24 in the same way as the emergency pack 28 so that, upon inflation of the liferaft the upper emergency pack is automatically drawn into the liferaft 24. Again, the connection maybe as described in GB-A-2318097. The various items 31
15 making up the emergency pack are contained within the second bag 30.

The upper emergency pack 29 sits on three generally rectangular planar panels 32 arranged end to end on top of the hermetically sealed bag 23 as seen in Figures 1 and
2. This divides the interior of the container into a lower compartment and an upper
20 compartment so separating the second bag 30 from the hermetically sealed bag 23 and providing support for the second bag 30.